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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/981,511

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Raymond J. Iannuzzelli

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12/03/2002

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EXAMINER

LEON, EDWIN A

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,511

Applicant(s)

IANNUZZELLI ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's response filed September 10, 2002 has been placed of record in the file as Paper No. 5.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Lin et al. (U.S. Patent No. 6,412,546). With regard to Claim 1, Applicant's admitted prior art discloses a component restraint computer system that is used to secure an electronic component (10) to a circuit board (22), comprising a backing plate (14); a spring (18); and a post (20) extending from the backing plate (14). See Fig. 1 and Pages 1-3.

Applicant's admitted prior art doesn't show a clip inserted onto the post, and pushed down the post towards the backing plate until the clip engages the stop surface

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of the post, the clip compressing the spring as the clip is pushed toward the stop surface.

Lin et al. discloses a system using a clip (50) inserted onto a post (66), being pushed down the post (66) until the clip (50) engages a stop surface (664) of the post (66). See Figs. 1-5 and Column 2, Lines 45-47.

Thus, it would have been obvious to one with ordinary skill in the art to modify the system of Applicant's admitted prior art by including a clip inserted onto a post, being pushed down the post until the clip engages a stop surface of the post as taught in Lin et al. to improve the contact pressure between the parts.

With regard to Claims 2 and 4, Lin et al. discloses the post (66) having an upper end distal (662) and the clip (50) for each post (66) is pushed down over the upper end until the clip (50) engage the stop surface (664) of the posts (3). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claims 3 and 10, Applicant's admitted prior art discloses four posts (20) protruding from the backing plate (14) and including stop surfaces (16), each post (20) having a spring (18) disposed thereon. See Fig. 1 and Pages 1-3.

With regard to Claim 5, Applicant's admitted prior art discloses the electronic component (10) and circuit board (22) being disposed between the backing plate (14) and the springs (18) and the electronic component (10) is secured to the circuit board (22). See Fig. 1 and Pages 1-3.

With regard to Claim 6, Applicant's admitted prior art discloses the heat sink (12) also disposed between the backing plate (14) and the springs (18), the heat sink (12)

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further disposed between the electronic component (10) and the springs (18). See Fig. 1 and Pages 1-3.

With regard to Claim 7, Lin et al. discloses the upper ends (top of 662) of the post (66) comprise tips (top of 662) formed between the distal end (top of 662) of the post (66) and the stop surface (664), each tip (top of 662) having a smaller cross section at its distal end (top of 662) than at the stop surface (664). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 8, Lin et al. discloses the upper end (top of 662) of the post (66) being substantially conically shaped. See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 9, Lin et al. discloses the clip (50) including protruding members (56), which define a hole (62) in which the post (66) is inserted, the protruding members (56) are pushed apart as the clip (50) is pushed along the post (66) towards the stop surface (664). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 11, Applicant's admitted prior art discloses a component restraint computer system that is used to secure an electronic component (10) to a circuit board (22), and having a processor and heat sink (12); an output device coupled to the processor comprising: a backing plate (14); a plurality of springs (18); a plurality of posts (20) extending from the backing (flat) plate or surface (14) through the circuit board (22) and the springs (18), each post (20) having a stop surface (16); the electronic component (10) and heat sink (12) sandwiched between the circuit board (22) and the springs (18). See Fig. 1 and Pages 1-3.

Applicant's admitted prior art doesn't show a plurality of clips, one clip per post, which, when inserted onto the posts, are pushed down the posts towards the backing plate until the clips engage the stop surfaces of the posts, the clips compress the springs as the clips are pushed toward the stop surfaces.

Lin et al. discloses a system using a clip (50) inserted onto a post (66), being pushed down the post (66) until the clip (50) engages a stop surface (664) of the post (66). See Figs. 1-5 and Column 2, Lines 45-47.

Thus, it would have been obvious to one with ordinary skill in the art to modify the system of Applicant's admitted prior art by including a clip inserted onto a post, being pushed down the post until the clip engages a stop surface of the post as taught in Lin et al. to improve the contact pressure between the parts.

With regard to Claims 12 and 14, Lin et al. discloses each clip (50) including protruding members (56), which define a hole (62) in which the post (66) is inserted, the protruding members (56) are pushed apart as the clip (50) is pushed down the post (66) towards the stop surface (664). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 13, Lin et al. discloses the post (66) having a distal end (top of 662) opposite the backing plate (2) that includes a tip (top of 662) that has a cross section that increases from the distal end (top of 662) of the post (66) towards the stop surface (664). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 15, Applicant's admitted prior art discloses a component restraint computer system that is used to secure an electronic component (10) to a circuit board (22), comprising: a flat plate (14); four clip retainer members (18); four

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posts (20) extending from the flat plate (14) through the circuit board (22) and the clip retainer members (18), each post (20) having a stop surface (16). See Fig. 1 and Pages 1-3.

Applicant's admitted prior art doesn't show a plurality of clips, one clip per post, which, when inserted onto the posts, are pushed down the posts towards the backing plate until the clips engage the stop surfaces of the posts, the clips compress the springs as the clips are pushed toward the stop surfaces.

Lin et al. discloses a system using a clip (50) inserted onto a post (66), being pushed down the post (66) until the clip (50) engages a stop surface (664) of the post (66). See Figs. 1-5 and Column 2, Lines 45-47.

Thus, it would have been obvious to one with ordinary skill in the art to modify the system of Applicant's admitted prior art by including a clip inserted onto a post, being pushed down the post until the clip engages a stop surface of the post as taught in Lin et al. to improve the contact pressure between the parts.

With regard to Claim 16, Applicant's admitted prior art discloses a component restraint computer system that is used to secure a device (10) to a circuit board (22), comprising: a backing surface (14); a plurality of posts (20) extending from the backing surface (14) through the circuit board (22), each post (20) having a stop surface (16). See Fig. 1 and Pages 1-3.

Applicant's admitted prior art doesn't show a plurality of clips, the clips engaging the stop surfaces of the posts.

Lin et al. discloses a system using a clip (50) inserted onto a post (66), being pushed down the post (66) until the clip (50) engages a stop surface (664) of the post (66). See Figs. 1-5 and Column 2, Lines 45-47.

Thus, it would have been obvious to one with ordinary skill in the art to modify the system of Applicant's admitted prior art by including a clip inserted onto a post, being pushed down the post until the clip engages a stop surface of the post as taught in Lin et al. to improve the contact pressure between the parts.

With regard to Claim 17, Lin et al. discloses the post (66) having a tip (top of 662) at its distal end (top of 662) that has a cross sectional area that increases from the distal end (top of 662) of the post (66) towards the stop surface (664). See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claim 18, Lin et al. discloses the tips (top of 662) being substantially conical in shape. See Figs. 1-5 and Column 2, Lines 45-47.

With regard to Claims 19-20, Applicant's admitted prior art discloses a component restraint computer system that is used to secure an electronic component (10) to a circuit board (22), and having a processor and heat sink (12); an output device coupled to the processor comprising: a backing plate (14); a plurality of springs (18); a plurality of posts (20) extending from the backing plate (14) through the circuit board (22) and the springs (18), each post (20) having a stop surface (16); the electronic component (10) and heat sink (12) sandwiched between the circuit board (22) and the springs (18). See Fig. 1 and Pages 1-3.

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Applicant's admitted prior art doesn't show a plurality of clips, one clip per post, which, when inserted onto the posts, are pushed down the posts towards the backing plate until the clips engage the stop surfaces of the posts, the clips compress the springs as the clips are pushed toward the stop surfaces.

Lin et al. discloses a system using a clip (50) inserted onto a post (66), being pushed down the post (66) until the clip (50) engages a stop surface (664) of the post (66). See Figs. 1-5 and Column 2, Lines 45-47.

Thus, it would have been obvious to one with ordinary skill in the art to modify the system of Applicant's admitted prior art by including a clip inserted onto a post, being pushed down the post until the clip engages a stop surface of the post as taught in Lin et al. to improve the contact pressure between the parts. The method limitations are deemed inherent.

Response to Arguments

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Clemens et al. (U.S. Patent No. 5,917,700), Jefries et al. (U.S.

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Patent No. 6,017,226), Johnson et al. (U.S. Patent No. 6,373,703), Wong et al. (U.S. Patent No. 6,101,093), Tseng (U.S. Patent No. 6,239,974), Mayer (U.S. Patent No. 6,468,011), Peterson (U.S. Patent No. 4,505,058), Swan (U.S. Patent No. 5,704,100) and Tseng (U.S. Patent No. 6,043,984) disclose restraint systems that secure electronic components to circuit boards having clips.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Edwin A. Leon
AU 2833

EAL
November 22, 2002



THO D. TA
PRIMARY EXAMINER